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Energy Communities in Ireland: Progress, Challenges and Potential

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Energy Communities in Ireland: Progress, Challenges and Potential

Dr Jeanne Moore

SECRETARIAT PAPER

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Abbreviations

ATU	Atlantic Technological University
CAROs	Climate Action Regional Offices
CBF	Community Benefit Fund
CRU	Commission for Regulation of Utilities
DZs	Decarbonising Zones
ECs	Energy Communities
EPA	Environmental Protection Agency
NUIG	Galway University
PSO	Public Service Obligation
RESS	Renewable Electricity Support Scheme
SDGs	Sustainable Development Goals
SEAI	Sustainable Energy Authority of Ireland
SECs	Sustainable Energy Communities
SETU	South East Technological University
SRESS	Small-Scale Renewable Electricity Support Scheme

Glossary

Building Energy Rating (BER): A rating system used for domestic buildings.

Decarbonising Zones (DZs): Areas designated under the Climate Action Plan 2023 where local authorities test low-carbon solutions.

District heating: A heating solution for densely populated areas that distributes heat and hot water from a central source, increasingly using renewables or 'waste' heat.

Energy affordability: A principle of energy policy focused on ensuring the cost of energy is manageable for consumers. Energy bills are influenced by supply costs, network costs, excise levies and taxation.

Energy community: A group of active consumers who voluntarily commit to providing environmental, social or economic welfare by engaging in renewable energy generation, energy sharing or trading; storage or supply, provided these activities are not for commercial purposes and do not constitute the primary profession of the members of the community (CRU, 2025). There are two types of energy community in Ireland: Sustainable Energy Communities (SECs) and Renewable Energy Communities (RECs).

Sustainable Energy Communities (SECs): A Sustainable Energy Community (SEC) is a community in which everyone works together to develop a sustainable energy system for the benefit of the community. This is achieved by aiming, as far as possible, to be energy efficient, using renewable energy where feasible and adopting smart energy solutions.

Energy poverty: A complex issue related to income levels, energy efficiency and energy costs, where households are unable to keep their home adequately warm.

Energy resilience: The capacity or ability to avoid, withstand and recover quickly from any unforeseen disruption or shock to the energy supply.

Energy sharing: A concept allowing citizens and energy communities to share self-generated energy, which will be introduced in Ireland following EU policy.

Energy Transition: The transformation of Ireland's energy system from fossil fuels to largely renewable sources to achieve climate neutrality by 2050.

Heat pumps: A technology that can produce heat from renewable sources like air, water or ground, used in individual buildings or district heating systems.

Just Transition: An approach that seeks to ensure that the process and outcomes of the energy transition are fair and equitable, ensuring equitable distribution of costs and benefits while protecting vulnerable groups.

Microgeneration: The generation of energy (e.g. electricity or heat) on a small scale by individual households, farms or businesses, such as through rooftop solar PV systems.

Micro-generation Support Scheme (MSS): A scheme that includes capital grants and tariffs for homes, farms and businesses to install solar panels and sell unused electricity to the grid.

Microgrid: Small-scale power grids that operate independently to generate electricity for a local area, such as a hospital or community.

One Stop Shop Service (National Home Energy Upgrade Scheme): A scheme for homeowners, landlords and approved housing bodies who want to bring their homes to B2 or higher BER rating, managed by SEAI.

Place-based approach: An approach to energy transition that supports local area energy and climate action planning, involving local authorities and communities.

Prosumers: Households or individuals who both consume energy and produce it, for example through microgeneration like solar PV.

Public Service Obligation (PSO) levy: A levy on household bills that supports national policy objectives, including renewable energy schemes.

Renewable Electricity Support Scheme (RESS): A scheme supporting renewable electricity generation, where energy communities in the past could apply through an auction. RESS 1 and RESS 2 had a dedicated community category. RESS 3 onwards do not. Support for Renewable Energy Communities export projects has transitioned to SRESS.

Renewable Energy Communities (RECs): Renewable Energy Communities (RECs) are grassroots initiatives where local people, organisations, authorities and others can come together to generate and manage renewable energy. The criteria of eligibility for a REC includes that at least one shareholder or member is registered as a SEC with SEAI.

Small-Scale Renewable Electricity Support Scheme: A renewable electricity scheme to support renewable electricity generation technologies with an electricity output greater than 50kW, but smaller than typical commercial generators.

Warmer Homes Scheme (Better Energy Warmer Homes Scheme): A fully funded scheme providing free home energy upgrades for homeowners who receive certain social welfare payments and live in the oldest, least energy-efficient homes.

Wellbeing: Used as a multidimensional concept reflected in the National Wellbeing Framework, having 11 dimensions for a good quality of life such as health, community, housing, skills and work.

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Chapter One: Context and Approach

1.1 Introduction

It has been more than a decade since NESC considered community engagement and the energy transition in Ireland, drawing on international experience in its report 'Wind Energy in Ireland: Building Community Engagement and Social Support' (NESC, 2014). The Council's report outlined the key potential role of communities in the energy transition in Ireland and recommended action to strengthen and enable further local development. From research in Germany, Scotland and Denmark, NESC concluded that communities were key potential actors in the energy transition and should be enabled and supported by both a clear national transition plan and local expert intermediaries who could provide the link between local and national action. Other research also pointed to the potential of community action in Ireland (c.f. Watson et al, 2020).

A policy shift towards recognising the role of energy citizens and communities (DCENR, 2015) and supporting policy framework developments and supports followed, delivered by the SEAI. The European Green Deal increased the capacity for energy citizens and energy communities for 'collective and citizen-driven energy actions to support the clean energy transition' (European Commission, 2019a). Recognition for energy communities has been included in EU Directives with policy and regulations continuing to enter Irish policy and practice.

The Council re-visited Energy in 2024, and as part of its work it recently produced a report which focused on households and energy communities and the crucial issue of how to ensure both were more deeply connected to and engaged in the energy transition. The context, experience and potential of energy communities in Ireland was explored through interviews and stakeholder engagement. The report, 'Connecting People to the Energy Transition' (NESC, 2025), drew on this work and set out key recommendations.

This Secretariat paper provides a more detailed discussion of the energy communities findings with additional material and examples. It examines the current practices of energy communities and recent developments to understand the state of play in Ireland. It describes the policy context that has enabled the growth in the number of energy communities in the EU and nationally.

To inform this work, meetings were held with 11 energy communities and a further 15 research and practice experts and policy stakeholders. Two online group meetings were convened as well as individual meetings with energy communities, cooperative experts/intermediaries, research experts and policy stakeholders. Discussion was further held with a network of energy communities, climate action officers and local authorities through the Pobal-supported Climate Connected project (Climate Connected, 2025). In this way, this work sought to explore the lived experience of those involved, as well as drawing on views and experience from research and practice experts and policy makers. This paper examines some areas of progress for energy communities, illustrating with some examples of what communities are doing on the ground. NESC would like to acknowledge the time and expertise of all those who contributed to this work.

Drawing on European experience, the paper identifies some of the types of contributions energy communities are making. While there have been positive developments, energy communities face barriers to further progress which are outlined. The paper concludes with discussion of some areas to progress to further enable energy communities to be significant actors in the energy transition.

The rest of this paper is structured as follows:

Chapter 2 outlines the context for the development of energy communities in the EU and Ireland including recent policy and practice.

Chapter 3 describes the variety and focus of energy communities in Ireland.

Chapter 4 explores the potential contributions of energy communities.

Chapter 5 outlines some enabling factors for energy communities.

Chapter 6 examines barriers experienced by energy communities.

Chapter 7 concludes with potential areas for further development of energy communities.

Chapter Two: Context for the Development of Energy Communities

2.1 Introduction

This chapter outlines the definitions of an energy community. It also describes the emerging EU policy context and recent policy developments in Ireland. The closing section provides an overview of the SEAI Sustainable Energy Communities programme.

2.2 Defining Energy Communities

Energy communities are viewed broadly in this paper as voluntary groups that are place-based, active in their local communities in ways that support the energy transition. There are a range of definitions and terms used to refer to energy communities in Ireland reflecting recent EU developments. These are energy communities as an overall term and two specific ones: Sustainable Energy Communities and Renewable Energy Communities.

Energy Community: The Commission for Regulation of Utilities (CRU) defines an energy community to be 'a group of active consumers, who voluntarily commit to providing environmental, social, or economic welfare by engaging in: renewable energy generation, energy sharing or trading; storage, or supply, provided these activities are not for commercial purposes and do not constitute the primary profession of the members of the community' (CRU, 2025a).

Sustainable Energy Community: A Sustainable Energy Community (SEC) is a community in which everyone works together to develop a sustainable energy system for the benefit of the community. This is achieved by aiming, as far as possible, to be energy efficient, using renewable energy where feasible and adopting smart energy solutions (SEAI, 2025a). Sustainable Energy Communities (SECs) are registered with SEAI 's Sustainable Energy Communities Programme to receive supports (SEAI, 2025a).

Renewable Energy Community: A Renewable Energy Community (REC) is the EU regulatory term under the Renewable Energy Directive (RED II). (European Union, 2018; European Commission, 2019c). A REC is a grassroots initiative where local people, organisations, authorities and others can come together to generate and manage renewable energy. The criteria of eligibility for a REC includes that at least one shareholder or member is registered as a SEC with SEAI. It is recognised as 'a local, citizen-led initiative that produces, consumes, shares, or sells renewable energy, aiming to deliver environmental and social benefits in the first instance, over profit' (Government of Ireland, 2025a:2).[1] RECs tend to be engaged in projects, including community projects in renewable electricity generation through solar PV or wind projects.

1 CRU (2023a) has determined that proximity requirements for a REC are to be set by those in the community- so that it is up to an energy community, defined as a Renewable Energy Community under the Clean Energy Package, to set their own requirements as to what area to include.

Key aspects of RECs are the voluntary nature of participation, the legal entity underpinning the group structure, and the focus on a wide range of community and wider benefits beyond financial gain. RECs can access a tariff for wind and solar energy generation through the Small-Scale Renewable Electricity Support Scheme (SRESS). In Ireland, the SRESS Terms and Conditions have additional stipulations for REC qualification, beyond the EU Definition, which was transposed in Ireland (Government of Ireland, 2025a). The EU recognises Citizen Energy Communities which came out of the Internal Electricity Market Directive and Renewable Energy Communities (place-based and renewables only), coming from the Renewable Energy Directive (Government of Ireland, 2025a; CRU, 2025a).

2.3 EU Policy Context

In the last six years, EU legislation has extended opportunities and rights for energy communities. Through the Clean Energy for All Europeans package, adopted in 2019, the EU introduced the concept of energy communities in its legislation for the first time, notably as citizen energy communities and Renewable Energy Communities giving them rights to generate, distribute, supply energy and have access to electricity markets (European Commission, 2019b). This was underpinned by the Revised Renewable Energy Directive 2018.[2]

The REPowerEU Plan put forward the shared political objective of achieving 1 energy community per municipality with a population of more than 10 000 by 2025 (European Commission, 2022a). It was amended in 2024 to include new opportunities for energy sharing to come into force by July 2026 (European Union, 2024). Energy sharing allows citizens and energy communities to share self-generated energy with others.

Across Europe, while there is uncertainty over precise numbers, there is an estimated 9,000 energy communities involving around 1.5 million citizens—a number expected to grow significantly (Murphy & Tucker, 2024; Enueron, 2025). The European Commission have ambition to grow this number. It was estimated in 2020 that around 17 per cent of installed wind and 21 per cent of solar capacity could be owned by local energy communities by 2030 (Caramizaru and Uihlein, 2020). Another estimate was that one in two Europeans could be producing their own electricity by 2050, covering 50 per cent of the EU's demand (REScoop and Friends of the Earth, 2016).

A further area of focus at EU level is to support energy just transition initiatives including energy communities. For example, enabling energy communities is part of the Toolkit for Just Transition Regions (European Commission, 2023a). In a recent good practice guide for energy communities in the Midlands and Eastern region, the European Commission focused on different ownership models, regulatory frameworks and funding opportunities sources, identifying ways to widen each of these areas (European Commission, 2025a).

For those working with energy communities in Europe, there is momentum for citizen ownership to tackle energy poverty, promote climate action, strengthen the economic competitiveness of SMEs, and boost household income (Vettros, 2024).

2 The EU Renewable Energy Directive or "RED II" requires every country to establish an enabling framework to promote and facilitate the development of Renewable Energy Communities. (Article 22(4) Renewable Energy Directive (EU) 2018/2001 REDII). European policies including the Clean Energy for All Europeans Package 2019 (European Commission, 2019b) and the Directive on Common Rules for the Internal Electricity Market 2019 (European Commission, 2019c) include aims to support the uptake of energy communities.

Critical perspectives outline, however, that while ambitious 'it remains relatively vague and open to interpretation' and while 'the EU has recently begun promoting a decentralised renewable energy transition, partly rooted in developing local energy communities, its effectiveness is highly uncertain' (Bonfert, 2024:4).

The European Commission is continuing to focus on engaging citizens and communities and the social aspects of the transition. The Citizens Energy Package expected by the end of 2025, aims to increase public participation, boost the Energy Union's social dimension, and combat energy poverty (European Commission, 2025b). European initiatives are focused on increasing the capacity of energy citizens, including energy communities through the Citizen Energy Advisory Hub and business planning supports.

A new EU initiative aims to support local energy communities (see Box 2.1).

Box 2.1: The European Energy Communities Facility

The European Energy Communities Facility (ENERCOM Facility) was launched in March 2025, co-funded by the LIFE Programme, and is designed to empower and support local energy communities across Europe. It will devote at least 7 million euros to provide direct support to 140 emerging energy communities across Europe mostly in the form of lump sum grants to develop robust business plans, specialised training to shape innovative, long-lasting business models.

These efforts aim to ensure the continued growth of energy communities, promoting long-term impact and contributing to the EU's climate objectives. It is implemented by a consortium of experienced organizations, including REScoop, Energy Cities, FEDARENE and GNE Finance supported by a network of 29 national experts who build connections with local initiatives. This collaborative approach aims to provide comprehensive support tailored to the needs of energy communities across the EU, Iceland, Moldova, North Macedonia and Ukraine.

Sources: European Commission, 2024a; European Energy Communities Facility, 2025.

2.4 Irish Policy Developments

Energy communities are supported in Ireland through the Sustainable Energy Communities Programme and a Community Enabling Framework run by the SEAI (further outlined in Section 1.3.3). In addition, there are several schemes administered by the Department of Climate, Energy and the Environment to support Renewable Energy Communities (outlined in Box 2.2).

Irish energy communities can access a tariff for wind and solar energy generation through the Small-Scale Renewable Electricity Support Scheme (SRESS).[3] SRESS follows on from the broader Renewable Electricity Support Scheme (RESS 1 and 2), where energy communities could apply but were not exclusive participants. The regulatory approach had allowed some communities to compete in RESS auctions, though delivering projects remains complex due to grid access and resource requirements, with financing and economic viability a key challenge. No fully community-owned solar projects are operational yet, though there are a few community projects with planning permission.

Box 2.2: Policy Measures to Support Energy Communities

Renewable Electricity Support Scheme: The Renewable Electricity Support Scheme (RESS) is an auction-based support scheme. This invites grid-scale renewable electricity generation projects to compete to receive a guaranteed price for the electricity they generate under a two-way floating feed in premium. The RESS includes a mandatory €2/MWh Community Benefit Fund. The first Renewable Electricity Support Scheme Auction (RESS 1) granted support for 7 community led projects including two solar parks with Community Power in Counties Mayo and Galway. In 2022, two more 100 per cent community owned solar projects with Community Power went through the RESS2 process and are being developed in Co. Tipperary and Co. Mayo. To date, two community projects (both under RESS 1 in 2022), including one solar and one wind, have received €40,000 each in grant funding.

Small-Scale Renewable Electricity Support Scheme: In 2025, SRESS was introduced to provide financial incentives to develop smaller scale solar and wind energy (to RESS). Renewables self-consumers are electricity customers who produce renewable electricity for their own use. They may then sell or store any excess electricity that they produce, if electricity generation is not their primary business. Similar supports and SEAI grants that were provided in RESS are expected to be available under SRESS (Houses of the Oireachtas, 2025). To qualify as community-led under CRU rules, projects must be 100 per cent community-owned.

Phase One of SRESS was launched in July 2023. It offers grants for renewable self-consumers above 50kW and up to 1MW through the Non-Domestic Microgen Scheme and the Business Grants and Supports Scheme. Phase Two of SRESS supports export focussed small-scale and community renewable projects, from 50kW up to 6MW. This cohort is to be supported via a tariff for the duration of the scheme. The SRESS also includes a mandatory €2/MWh Community Benefit Fund. This was designed for community, SME and farm export projects, offering a simpler route to market, with fixed tariffs for solar and wind, without an auction or performance bonds. As with RESS (Renewable Electricity Support Scheme), this is supported by the PSO. All export projects up to 1MW can also apply to SRESS, and need not be communities, SMEs or farmers. The scheme opened for applications on 27 January 2025. SRESS fixed tariffs have been set across six categories – three community rates and three SME rates, covering both solar and wind. Community tariffs are the highest, reflecting the additional development and financial challenges faced by these groups.

3 CRU (2023) has determined that proximity requirements for a REC are to be set by those in the community- so that it is up to an energy community, defined as a Renewable Energy Community under the Clean Energy Package, to set their own requirements as to what area to include.

Community Benefit Funds offer an opportunity for communities to benefit from their local renewable energy resource and must be established by all SRESS projects to be used for the wider environmental, social and economic well-being of the local community, in line with the UN Sustainable Development Goals. All RESS and SRESS Projects must establish a Community Benefit Fund (CBF) before their commercial operation date. The CBF and the SRESS Project must be registered with the SRESS 1 Community Benefit Funds National Register which will be operated by the Sustainable Energy Authority of Ireland (SEAI). The contribution is set at €2/MWh. This aims to ensure that local communities hosting renewable projects benefit. The RESS Community Benefit Fund was recently reviewed to inform future RESS Terms and Conditions.

Microgeneration: The Micro-Generation Support Scheme (MSS) provides support to domestic and non-domestic applicants for renewable installations such as farms, businesses and community buildings with solar panels who wish to sell back unused electricity to the grid. Grants are provided by the Sustainable Energy Authority of Ireland (SEAI).

Department of Agriculture Food and Marine Targeted Agriculture Modernisation Schemes: TAMS 3 provide grants to farmers to build and/or improve a specified range of farm buildings and equipment on their holding. The TAMS Solar Capital Investment Scheme (SCIS) encourages the purchase of solar investments for farms own electricity self-consumption, from 2kW to 62kW, thereby reducing dependence on fossil energy.

The Sustainable Energy Communities Programme was set up in 2015. Its aim is to engage and enable the energy citizen. Energy communities are supported by the Sustainable Energy Authority of Ireland (SEAI)'s Community Enabling Framework, put in place to address some of the key challenges of developing community renewable projects. This framework includes a suite of resources to help address some of the unique challenges of community generation projects. These include nine information guides on the SEAI website on key aspects of the development process: focusing on: the electricity system; Solar PV, Grid Connection, The Planning Process, Onshore wind, Financing projects, Community groups and governance, Stakeholder and community engagement, and Business planning and procurement. A mentor panel work on the ground with communities prior to acceptance on the enabling framework and in energy efficiency and other relevant opportunities for SECs. Enabling grants are available to support communities in key development activities such as environmental studies and consenting.

Sources: The Department of the Environment, Energy and Climate (2025); SEAI (2025a; 2025b); additional media sources; Community Power (2025); Houses of the Oireachtas (2025).

The Commission for the Regulation of Utilities (CRU) has taken a step-by-step approach to the development of an enabling framework to underpin energy communities as actors in the energy market. Grid connection policy is under development and a new Electricity Generation and System Services Connection Policy was published in 2024. This is intended to increase opportunities for connection for smaller-scale and non-exporting projects, including mini-generation, small scale generation, repowering of existing renewable generation and community-led projects (CRU, 2024).

ESB Networks manages new connections to the electricity grid, under rules determined by the Commission for Regulation of Utilities (CRU) through a grouping/batch process in its Enduring Connection Policy - Generation and System Services (ECP-GSS). Community-led renewable projects can apply bi-annually as part of a batch and will be charged lower fees (CRU, 2024).

However, grid connections take time to be approved and are limited by how feasible grid connection would be technically and economically- depending on location, many projects can be deemed not feasible at an early stage.

Grid access is recognised in the policy system as a challenge for energy communities. SEAI have commissioned comprehensive county grid studies to identify capacity in the network and support communities to identify suitable project locations. Eleven county studies have been completed to date with four more planned for 2025. DCEE have applied for EU funding to look at approaches to grid access and look at what other member states are doing, for example the Netherlands are further advanced. Other ownership models may be considered as part of future policy development.[4]

Planning permission must be received before a grid offer can be accepted. With the Electricity Connection Policy – Generation and System Services (ECP-GSS) community-led projects will be processed for a grid connection in batches along with other renewable projects (CRU, 2024). A project's planning application must first be acknowledged as complete before a grid application may be submitted. A typical community solar farm planning application may cost in the region of €60,000-€80,000 (SEAI, 2024a).

REScoop, the European federation of energy communities, outline the EU directives while creating the regulatory and governance parameters for enabling energy communities, these must be transposed but in ways that are appropriate for each member state's geography, energy market, infrastructure, cultural and policy environment. This brings variation in the growth and development of energy communities around Europe but also variation in what they can do. While Ireland has supportive policies, further progress is needed to match leading EU countries. According to REScoop (2023a), Ireland has made "average" progress on implementing EU rules, while six countries, including Belgium, have made "good" progress. Most aspects have been transposed into Irish law, but there are some areas where implementation has not been completed (REScoop, 2023b).[5] Tools/approaches such as energy sharing, are being progressed in Ireland but not yet adopted in Irish law, but examples of practice exist in other Member States (CEER, 2025). Solar PV, biomass, and small hydro as accessible renewable energies have expanded access, supported by ownership policies. Energy sharing (peer to peer energy) is being progressed by the regulator, CRU, and when the regulations are in place will bring energy sharing regulations for all domestic and SME customers.

The policy context for energy communities has provided a firm foundation but this is still evolving to keep in-step with EU Directives. The Government is committed to increasing the number of Sustainable Energy Communities (Government of Ireland, 2025b) and to supporting communities to secure grid access for local renewable projects. The Small-Scale Renewable Electricity Support Scheme (SRESS) will be promoted to simplify market access for community owned solar and wind projects; and ensure community gain arrangements are in place and consider permanent, cheaper electricity as a possible option under community gain schemes.

4 DCEE correspondence with NESC Secretariat.

5 Member states are required to have transposed provisions on citizen energy communities and provisions on renewable energy communities; however, this varies greatly (Kerneïs, 2023).

2.5 SEAI's Sustainable Energy Communities Programme

With some targeted policy measures in place, there has been considerable growth in the number of energy communities that have sought official recognition in the SEAI's Sustainable Energy Communities (SECs) programme of support, advice, a toolkit and grants with an Enabling Framework for Community Participation.

There are currently over a thousand SECs registered with the SEAI, but it is not clear how many are currently active (See Figure 1.1). These registrations represent a comparatively high number in Europe (Brennan & Van Rensburg, 2024); SEAI, 2025a). A small number, approximately 3 per cent of those, are Renewable Energy Communities, engaged in renewable energy generation projects.[6]

Figure 2.1 maps the SECs across the island of Ireland:

Source: SEAI (2025c).

6 Correspondence from DCEE to the Secretariat.

Recent research on the formation of Sustainable Energy Communities using small area census data found SECS were more likely to form in rural areas, areas with greater retirement levels and fewer children, and areas with greater shares of employment in agriculture and skilled trades (SEAI, 2025b). SEAI outline that 'SECs appear to form in areas of lower average income' but also that 'SECs are also under-represented in areas of more extreme deprivation, as measured by the Pobal Deprivation Index' (SEAI, 2025b: 15). A majority of SECs were in the vicinity of other SECs, suggesting proximity to other SECs plays a role in SEC formation.

SEAI's network of sustainable energy communities are supported across the three broad stages of Learn, Plan and Do (See Figure 2.2). A panel of network mentors and regional coordinators help guide communities through this Learn-Plan-Do Programme journey, including the development of a fully funded local energy master plan and a register of opportunities for actions to be implemented. Compared to other EU countries, this is seen as a positive enabling model (REScoop, 2023b).

Figure 2.2: Learn, Plan and Do

Source: SEAI (2025c).

The 'plan' phase has reportedly been successful. 185 Energy Master Plans have been developed at local level through community energy efforts and enabling mentor, information and grant supports. The supports included: assignment of a local SEAI mentor; access to dedicated SEAI funding (€10,000-€25,000) to develop an Energy Master Plan; engage in community platforms, e-zine, network only groups; opportunities to attend regional/national training, events and webinars. Earlier this year there were 38 mentors aligned with LA areas across 4 regional offices. Working closely with local authorities is increasingly important. For communities engaged in renewable energy generation (wind or solar PV), the SEAI Community Enabling Framework is designed to support those a sub-set of Sustainable Energy Communities (SECs) recognised as Renewable Energy Communities (RECs) to develop grid scale renewable energy projects. This framework includes a suite of resources to help address some of the unique challenges of community generation projects. These include a toolkit with nine information guides on key aspects of the development process on the SEAI website and a panel of trusted advisors to support feasibility assessments on potential projects. Enabling grants to support communities in key development activities such as environmental studies and consenting are anticipated but currently under review.[7]

7 Correspondence from DCEE and SEAI to the Secretariat.

Chapter 3: Variety of Energy Communities in Ireland

3.1 Introduction

Energy communities, led by volunteers, represent some of the most engaged citizens in the energy transition across Europe and in Ireland. Research project Recode (Brennan and Van Rensburg, 2024) showed Ireland has twice the number of energy communities as any other countries including Germany. However, there is less known about how long they last or their level of activity in Ireland.

Northern Ireland has a long-standing energy cooperative, Drumlin Wind Energy Cooperative, broad support for community energy following an influential report by the Fermanagh Trust (2012). However, Northern Ireland remains the only UK region where community energy does not yet feature in policy and is not explicitly defined (Action Renewables, 2025).

This chapter provides an overview of energy communities in Ireland and Northern Ireland. This helps to illustrate the level of engagement and the variety of ways that communities are engaged.

3.2 Areas of Focus

Broadly, energy communities in Ireland are focused on improving their local area and its wellbeing for a range of reasons. These include to reduce energy costs, generate energy for the local community, increase energy efficiency for local community houses and community centres, tackle energy poverty and to reduce emissions. As part of the SEAI programme, SECs have undertaken capacity building and training and energy communities have completed Energy Master Plans, installed solar panels and completed retrofits. Others are developing projects on biogas, wind energy and supported members of their communities to do energy efficiency at home.

To varying degrees, energy communities across Europe can be considered as community actors seeking to participate in energy markets; as a network of stakeholders beyond the local; helping to increase local identity, bringing a sense of community; and process as often created through a bottom-up and collaborative way but not always (Lennon and Dunphy, 2024).

3.2.1 Energy Efficiency and Retrofitting

Overall, energy communities vary from the small scale to being able to employ people full-time and are supported by SEAI, local authorities, energy cooperatives, energy agencies, government and philanthropic grants. One of the larger examples is Dunleer Energy Team. This is a SEC and social enterprise with 4 people employed and 450 homes retrofitted operating across Fingal to Monaghan (See Box 3.1).

Box 3.1: Energy Team Dunleer SEC

Energy Team are a sustainable energy community since 2015 and social enterprise that support homeowners to become more energy efficient, provide local training and workshops. They have retrofitted 450 homes. They have 10 community members in the team. They have been active in working with the local public participation network and have a town team development -Town Centre First model. The County Louth group is a member of SEAI's Sustainable Energy Community Network, which gives them access to SEAI's resources and connects them with communities around Ireland that share ideas and initiatives on sustainability.
Dunleer SEC offers advice on the best solutions for homeowners, community groups and business owners in their local area. They help them to reduce energy consumption, use renewable energy solutions, save money, and address the challenges of climate change.

Sources: Local Government Ireland (2025); Interview; SEAI (2020).

Some urban energy communities have been involved in retrofit and energy efficiency work (see for example Box 3.2 The Triple SEC). Retrofit work is also underway in Galway with the Galway Warm Home Hub which is a free drop-in and online service located within the Westside community at the Westside Resource Centre in Galway, Ireland. It was formed as part of the European NetZeroCities pilot project for the Westside area. While not an energy community, it grew from the Galway Energy Cooperative (Warm Home Hub, 2025).

Box 3.2: Example - The Triple SEC

In 2023, Connecting Cabra joined forces with Phibsboro Village Climate Club SEC and Cosybatter SEC to form the Triple SEC initiative to promote sustainable change in the north of Dublin City. Triple SEC in Cabra is working to retrofit 3 homes with energy-saving features, the effective dissemination of knowledge about available grants and the promotion of active community participation in sustainability initiatives. The planned home renovation in Cabra has an investment cost of €68,000. Triple SEC were the winners of an SEAI Energy Award in 2024 in the category – Inspirational Community.

Supported by the European Commission, Triple SEC is one of a number of pilot projects assisted to deliver future-proof residential buildings including Belgium (Energent), Portugal (Cooperinico) and Bulgaria (Izgrei). The support service for Citizen-led renovation is a Commission initiative.

Source: European Commission (2024b); Connecting Cabra (2025); SEAI (2024b).

3.2.2 Working with Local Authorities

There has been a growing relationship between local authorities and energy communities, supported by the Climate Action Fund. The fund, which is provided to local authorities to partner with community groups, provides amounts of up to €100,000 to larger local projects over an 18-month period. It is paying for initiatives like the installation of renewable energy systems among other activities and was €27 million in 2024 (DECC, 2024). To be eligible, communities must become a Sustainable Energy Community with the SEAI. The Leader Rural Development programme includes renewable energy projects for funding, administered at a local level by 29 local action groups alongside other funding opportunities (CARO, 2024).

Local Authorities are critical for the implementation of national climate change policy at local level (Government of Ireland, 2021). The Local Authorities have been set more ambitious targets for 2030, including 50 per cent improvement in energy efficiency; 80 per cent heat by renewable sources and 51 per cent reduction in CO2 emissions. Key institutions that support local authorities are the Climate Action Regional Offices (CAROs). Established in 2018 to provide guidance, advice and support to Local Authorities to leverage the capability, reach and resources of the sector to effectively address climate change across Ireland. Energy agencies such as Codema in Dublin and the Tipperary Energy Agency have also played a key role in developing local energy action.

There are increasingly active local authorities working with energy communities. In total there are 23 Local Authorities who are providing bridging finance to SECs in the development of the Energy Master Plan. Sligo County Council has provided bridge-funding to several SEC's, including the Strandhill SEC, who have completed their Energy Master Plan (EMP) with the help of Global Green Ltd (Sligo County Council, 2024).

Mayo County Council has collaborated with Louisburgh SEC and Louisburgh Climate Action Louisburgh Locality (CALL) (see Box 3.3).

Box 3.3: Louisburgh CALL

Louisburgh Locality encompasses the areas of the western seaboard from Killary harbour to the southern shores of Clew Bay including Clare Island and Inishturk. Climate Action Louisburgh Locality CLG (CALL) was formed after the local Sustainable Energy Community (SEC) joined forces with various biodiversity and sustainability groups. The company has several pillars under which it promotes activities to reduce CO2 emissions and protect our climate against global warming. These include public awareness, biodiversity- tree distribution and land procurement, food production. They work closely with SEAI and Mayo County Council to promote local microgeneration and building energy upgrades.

CALL, with the assistance of Mayo County Council, were selected by the European Shared Green Deal as the Western European Community to carry out a Social Study on Renovations. This project involved the recruitment of 36 people including homeowners and green industry professionals to run Eco-tours and workshops to share knowledge and help develop toolkits to inform the European Commission on development of future energy policy.

Through its Solar PV Meitheal activities, it has assisted in the installation of approximately 300 kWp of electrical energy in our locality.

Source: CALL (2025).

Other collaborations are developing around Decarbonising Zones (DZ) required under the Climate Action Plan 2023 as part of the Local Authority Climate Action Plans. This is an area selected by a local authority to test a range of innovative solutions to address local, low-carbon energy, GHG emissions and climate needs (Codema, 2025). There are 41 DZs in total across Ireland, 29 of which are urban, 6 part-urban and 6 rural (DCEE, 2025). In Dublin, energy agency Codema has supported local authorities to plan and engage over the DZs, providing an evidence base and DZ plans and Local Engagement Plans for working with communities in Ballymun and Ringsend / Poolbeg DZs (Codema, 2025). Kildare County Council selected Maynooth as the DZ following collaborative efforts of the local SEC (see Box 3.4).

Box 3.4: Maynooth SEC and Kildare Decarbonising Zone

Established in 2018, Maynooth Sustainable Energy Community had a vision to be a sustainable, low carbon community. They joined SEAI's programme and completed their Energy Master Plan and then applied to be a DZ. They secured the support of 24 other organisations and were selected to be the DZ for Kildare. After a year they found out they had been successful. The zoning will see a demonstration retrofitted home developed, cycle lanes and sustainable transport development over the period.

Maynooth was selected as a DZ to act as a test bed in the County to assess the viability, and for wide roll out, of measures to other towns in the County and Country. Having Maynooth University in proximity, an active travel plan, and transport opportunities were helpful to their selection. The scope and organisations of the DZ are much broader than renewable energy with the Kildare County Council, CARO, An Taisce and Maynooth University researchers have a role to start of the process particularly in a series of local engagements with business, farmers, to support the development of DZ and the Local Authority Climate Action Plan.

Source: Interview.

3.2.3 Energy Poverty Focus

Some energy communities have worked to reduce energy poverty, through for example supporting energy efficiency and retrofit activity in disadvantaged communities (Wexford Town SEC for example, outlined in Box 3.5 and Bryson Energy in Northern Ireland, in Box 3.6.

Box 3.5: Collaborations in Southend, Wexford

Wexford Town Sustainable Energy Community (SEC) was formed in December 2021, and at that time completed a Southend Home Energy Survey. A key finding was the reliance on back boilers and no central heating in many of the houses, leading to fuel poverty.

An Energy Steering Group was subsequently formed in September 2022 comprising the Sustainable Energy Community, Wexford County Council, the Sustainable Energy Authority of Ireland (SEAI), the South East Technological University (SETU), the Department of Health, and the High Performance Building Alliance. Following events and planning, in February 2023, a local energy champion was appointed under the Sláintecare Healthy Community Programme. This local resource worker was employed for 2 hours per week to promote energy improvements in the local community and applications to the Warmer Homes scheme. SETU led a co-designed research evaluation project.

To date, more than 25 houses have received retrofit upgrades and feedback has been very positive, including the use of heat pumps. The close collaboration of different organisations, including the energy community and the positive impact of the energy champion on retrofit grant applications have been noted as two positive outcomes so far.

Source: Wexford County Council, meeting with NESC Secretariat.

Box 3.6: Bryson Energy Projects

Part of the wider Bryson Charitable Group, Bryson Energy runs programmes to tackle fuel poverty, promote energy efficiency, and increase renewables adoption in Northern Ireland. While not purely a community-owned model, Bryson's initiatives often work closely with local groups to enhance capacity and deliver practical, cost-saving solutions. Through its partnerships, Bryson Energy has helped communities take the first steps towards greener, more affordable power.

Source: DTNI (2025).

3.2.4 Networks and Collaborations

Some energy communities have been active in building networks in a local area, providing a means of connecting over energy and wider sustainable development issues. An example of network building is Youghal Blue and Green Community Network (See Box 3.7).

Box 3.7: Youghal Sustainable Energy Community

Youghal Blue and Green Community Network established Youghal Sustainable Energy Community in 2021 and is an environmental community network, focusing on the coast and marine ('blue') and nature, biodiversity and energy efficiency ('green'). The network is composed of individual volunteers, representatives from other local community organisations, and has over 50 network members including schools, sporting clubs and voluntary groups. The network is supported by two full-time employees and one part-time, funded by the Department of Rural and Community Development and philanthropic funding from Tomar Trust.

Source: Youghal Blue and Green Community Network (2025).

A new civil society coalition, Community Energy Northern Ireland is working to support community energy in Northern Ireland. Northern Ireland Sustainable Energy Communities NI (SEC NI) will support energy communities, with support from Atlantic Technological University (ATU), Drumlin Wind Energy Co-operative, NEA NI and NI Community Energy (Advice NI, 2024). There are calls for a vision for community energy to shift it from a pioneering concept to 'the mainstream backbone of Northern Ireland's renewable landscape' (DTNI, 2025).

Other types of collaborations are being coordinated by energy communities for the purchase and installation of solar panels. A Solar Meitheal is a community-led concept developed through peer-to-peer community engagement in the SEC network and facilitated through the SEC programme mentors.

It involves informing and grouping homeowners in a local area who want to install Solar Photovoltaic (PV) panels on their homes. This grouping makes it easier to source quotes from Solar PV suppliers and installers, through bulk purchases and simplify planning multiple installations in one community. Many sustainable energy communities have carried out a Solar Meitheal bringing in solar PV to a number of homes and community centres in their locality for example Mulranny, Louisburgh, Greystones and Delgany (SEAI, 2024a).

Northern Ireland Community Energy (NICE) is a cooperative that installs solar PV systems on community buildings and social enterprises across Belfast and beyond. Through a share offer, individuals and organisations can invest in sustainable energy while receiving modest financial returns. The generated electricity often directly benefits community centres, charities, and educational facilities—helping reduce overheads and freeing up resources for vital community services (DTNI, 2025).

3.2.5 Generating and Supplying Renewable Energy

While numbers are still small, Renewable Energy Communities are generating electricity for the community. The only fully community owned wind farm in Ireland is Templederry Community Wind Farm, cited as a front-runner in NESC's (2024) work and remains unique. It continues to operate with two turbines generating approximately 15 GWh per year. The numbers are set to increase in the coming years with the SRESS and there is now a representative organisation for 100 per cent owned community energy generation projects, Nationwide Community Energy Ireland CLG (NCEI) is the representative organisation for 100 per cent community owned energy generation projects in Ireland.

Growing from Templederry and in a partnership of community energy groups, Community Power has become a community owned electricity supplier that draws from wind and hydro electricity generators (see Box 3.8).

Box 3.8: Example - Community Power

Community Power is Ireland's first community owned electricity supplier, a partnership of community energy groups that grew out of Ireland's first community owned wind farm, Templederry Wind Farm in Co Tipperary. Two turbines generate about 15 GWh of electricity every year and renewably generated electricity bought from a handful of small and micro hydro and wind generators across Ireland are sold on to community power customers around Ireland. Claremorris and Western District Coop is a member and has a grid connection for two community owned solar farms in Claremorris totalling 8MWh of renewable electricity, expected to start generating in 2024.

A virtual power plant (VPP) refers to a cluster of dispersed generator units, controllable loads and storage systems, aggregated to operate as a unique power plant. Community Power buys renewable power that is owned by communities, co-operatives or citizens, and sell it to customers. It is relatively unique in Ireland because it offers small to medium sized generators the opportunity to trade on the Integrated Single Electricity Market (I-SEM).

The development of the Community Power Virtual Power Plant (VPP) was funded by Interreg NWE, a match funding loan provided by Clann Credo (social finance provider) equity investment from community members (using dividends from a community wind turbine project) and the sale of renewable electricity to community consumers. Community Power supports other communities across Ireland to develop local ownership energy projects.

Sources: Community Power (2025); Claremorris Energy Coop (2024).

Becoming energy independent is a strong goal of many island communities in Europe with Samsø in Denmark, an early example. Samsø produces more energy than it uses, coming from 11 onshore and 10 offshore wind turbines, and supplemented by biogas and solar facilities (European Commission, 2020). One of Ireland's longest running projects is an island community - the Aran Islands, detailed in Box 3.9.

Box 3.9: Aran Islands Energy Cooperative (Comharchumann Fuinnimh Oileáin Árann)

The Aran Islands Energy Co-operative, Comharchumann Fuinnimh Oileáin Árann, has operated for 13 years and has 100 household members aiming for energy self-sufficiency. Working closely with SEAI, GMIT, and Galway University (NUIG), it has developed an Energy Master Plan to drive the clean energy transition. The cooperative carries out retrofits and has installed solar panels. It employs two full-time and two part-time staff. It has repeatedly sought planning permission to install a 900-kW wind turbine on Inis Meáin, but was unsuccessful. An electricity cable upgrade is also needed to export surplus wind energy.

The Aran Islands were designated a Decarbonising Zone by Galway County Council for their climate readiness, strong community and defined geographic scope. Along with Bere Island, Sherkin, Cape Clear, Inishbofin, Arranmore and Tory Island, they are part of the European Commission's 30 Renewable Islands for 2030 initiative, receiving tailored support over three years (European Commission, 2023a).The Energy Cooperative also works closely with the Galway-Mayo Institute of Technology (GMIT) and Galway University (NUIG) on the mainland to advance the clean energy transition on the Aran Islands. The Cooperative has been established for 13 years with 100 households as members. They want to be self-sufficient. They are doing retrofits on the islands and now have solar panels. They employ two people full time and two are part-time. They sought to install a 900-kW wind turbine on Inis Meáin Island, one of the three Aran Islands' islands. Despite a number of attempts they have not been approved for planning and the electricity cable to the island would need to be upgraded to facilitate the export of surplus wind energy.

The Aran Island as well as Bere Island, Sherkin island, Cape Clear, Inishbofin, Arranmore and Tory Island were included in the European Commission's '30 renewable islands for 2030' initiative (European Commission, 2023d). Over three years, the islands will receive assistance meeting their locally defined needs.

Sources: Interview, The Aran Islands Energy Cooperative (2025); Galway County Council (2023); EC (2019).

A well-established community energy cooperative is in Drumlin, Northern Ireland (See Box 3.10).

Box 3.10: Drumlin Wind Energy Co-operative

A pioneer in the sector, Drumlin Wind Energy Co-operative was established in 2012 and now operates 6 community owned wind turbines in counties Antrim, Down, Tyrone, and Fermanagh. Residents can buy shares in the co-op, meaning the profits from the turbines stay local and in 2024 a share offer raised nearly £1.5 million to repower two turbines doubling their efficiency. Drumlin's cooperative model empowers members to play an active role in Northern Ireland's low-carbon transition.

Source: Drumlin Wind Energy Cooperative (2024).

Chapter 4: Potential Contribution of Energy Communities

4.1 Introduction

Energy communities have been given rights under EU law to participate fully in the energy transition, making the means available for energy communities who wish to be key actors in the transition and shape and share the local value from energy efficiency and energy generation.

The European Commission outlines this role and potential for future development:

> Energy communities can be an effective means of re-structuring our energy systems, by empowering citizens to drive the energy transition locally and directly benefit from better energy efficiency, lower bills, reduced energy poverty and more local green job opportunities (European Commission, 2025c).

Energy communities are viewed as key stakeholders in the democratisation of Europe's energy system.

This chapter sets out the broader benefits and impact of energy communities. It also sets out specific contributions.

4.2 Broader Benefits

REScoop have outlined the potential broader benefits of energy communities, beyond environmental ones to include contributing to the social acceptance of renewables; strengthening social cohesion and trust; mobilising local capital; and strengthening local development (REScoop, 2023b).

Some of these benefits featured in a recent assessment of Renewable Energy Communities by the Department of Climate, Energy and the Environment (See Box 4.1).

Box 4.1: Benefits of Renewable Energy Communities

Environmental: Reduced carbon emissions through local renewable generation, contributing to Ireland's 2030 target of 80 per cent renewable electricity.

Economic: Enabling RECs to participate in, and benefit from, the energy transition by powering their communities through self-owned generation and by selling electricity to the grid. Community funds generated from energy sales, similar to the €2 per MWh Community Benefit Fund under RESS, could support local projects.

Social: Increased local acceptance of renewables through direct ownership, reducing planning objections.

Capacity building: Developing REC experience and knowledge over time enables capacity building in local areas, helping to secure the future of renewables.

Security of supply: RECs contribute to the security of energy supply within their communities and wider society. By working together members can deliver renewable projects of a larger scale than would be possible as individuals, fostering capacity building and securing the future of renewables.

Source: Government of Ireland (2025a).

The benefits of communities specifically becoming Sustainable Energy Communities are outlined by SEAI as including achieve financial and energy savings; improve public wellbeing and comfort from energy efficient buildings; boost local knowledge, skills and employment; build capacity and leverage funding; contribute to climate change targets; and support an equitable transition to a low carbon society (SEAI, 2025b).

Benefits have also been outlined as part of new Irish research such as the Recode project (See Box 4.2).

Box 4.2: Recode Project

Led by the University of Galway and funded by SEAI, the Recode project is engaging with renewable energy community participants, community members, industry members and the public to assess challenges facing these projects and identify potential solutions including co-development with private industry. It aims to develop a replicable model and road map to enable Renewable Energy Communities to co-own and govern the assets themselves in support of their long term equity, prosperity and sustainability.

The potential benefits of energy communities are noted to include helping to bring fairness and sustainability to the energy transition, dealing with public acceptance concerns; building social coherence and ensuring greater participation by citizens in the energy transition; and providing access to capital resulting in local investment. It outlines how community energy projects can increase local opportunities including: cost savings, job creation, financial returns, match funding, reduced dependence on external sources, addressing energy poverty, contribution to national climate targets, sustainable infrastructure, community involvement in decision-making, and educational benefits.

Barriers for energy communities identified including the need for upfront costs and lack of initial funding; complex and lengthy planning process; grid access and connection delays; regulatory uncertainty; limited access to expertise; insufficient guidance and toolkits; volunteer burnout; challenges in sustaining momentum; limited government support; barriers to accessing grants; grid capacity issues; and technology adoption.

Source: Brennan and Van Rensburgh (2024; 2025).

4.3 Specific Contributions

There is potential for energy communities to bring economic, social and environmental value, detailed further in the following sections including some illustrative examples.

4.3.1 Bring Local Economic and Energy Savings

The potential local value of energy community projects was highlighted in the NESC (2014) report. The economic value can be considerable from local and citizen renewable energy projects in terms of community benefit. A study from the Occitanie Regional Energy and Climate Agency (AREC Occitanie) investigated the economic impact of local and citizen renewable energy projects and found that for each €1 of public subsidy invested, €50 of economic benefits are generated for the territory (Fedarene, 2024; Energy Community Platform, 2022).

With community ownership, the economic values increase. The Scottish Just Transition Commission in a report on the Shetland islands concluded that forms of community ownership can super-charge the creation of community wealth (Just Transition Commission, 2024). Research in France and Germany shows that locally controlled and financed renewable projects deliver 2 to 8 times more return to the local economy than projects built by external developers (REScoop, 2024b).

SEAI research suggests that energy communities and wider energy action in the local community may have a link. SEAI (2025b) found that SEC establishment is associated with increased grant value issued as part of Better Energy Homes and Solar PV.
Case studies also point to energy communities having a role in supporting energy efficiency action. Ecovision is a long-established community led organisation which includes a growing number of communities (see Box 4.3).

Box 4.3: Ecovision

EcoVision, the trading name of Energy Communities Tipperary Cooperative (ECTC) CLG, is a not-for-profit, community led, energy upgrade and retrofitting organisation. ECTC was officially founded in 2015, and has since grown to include 15 communities. It has several initiatives and collaborations with support from government departments and EU funds including on energy poverty and just transition. By 2024, Ecovision has upgraded more than 900 houses and 50 community and commercial buildings, saving over 10 GWh of energy, the equivalent of the average annual electricity consumption of more than 2,300 Irish households.

Source: Ecovision (2025).

Another potential value is through protecting or reducing energy costs. There is evidence that community-owned energy can remain more affordable for users during crisis periods (Baczynska, 2022). REScoop (2025) outline that energy communities helped to protect their members from high electricity prices during the energy crisis, for example in Flanders and Wallonia, Belgium.

The motivations for energy community include economic benefit but it is not the primary motivation for energy community actors (Bashi et al, 2023). Other research points to generating renewable energy (23 per cent), economic reasons (22 per cent), followed by environmental motivation (16 per cent) as primary motivations in a Horizon 2020 study of 76 local energy communities located in 11 different countries (Sæle et al, 2021). As energy sharing is enabled and new technologies become available, the economic and social value will deepen, with research needed to examine the impacts and benefits.

4.3.2 Energy Can Be a Community Action Gateway

Of all climate-related action at a local community level, energy can a critical gateway- bringing opportunities to reduce costs, share benefits and even generate income, where possible (Baczynska, 2022).

Energy projects and the activities of energy communities can have a wider reach beyond energy to other climate and sustainable development areas, through a 'diffusion of sustainability' (Boyle et al, 2022). Through an engagement process and 'scaling deep' the impacts from the Dingle Peninsula Project are wider than might have been envisaged (outlined in Box 4.4).

Box 4.4: Dingle Peninsula 2030

Dingle Peninsula 2030 was an award-winning multi-partner initiative on the Dingle Peninsula, Co. Kerry involving the Dingle Creativity and Innovation Hub, ESB Networks, North East and West Kerry Development (NEWKD), and MaREI. It was a 3-year project involving the implementation of new technologies to help develop a low carbon network. That project focused on the deployment and assessment of the impact and role of a range of new technologies, in the development of a smart resilient, low carbon electricity network. It helped establish the Dingle Sustainable Energy Community and supported them in producing the Dingle Peninsula Energy Master Plan.

The Dingle Hub, established in 2017, continues to build on this project and brings together people and communities on areas of sustainability, digital transformation and creative industries.

One of the recommendations from UCC MaREI research is to support local champions to mobilise action within a community. They can support collaborative, community-led approaches to energy citizenship over individualist consumer-based alternatives.

Source: Boyle et al (2021; 2022).

A focus on energy in the Dingle Peninsula was taken up by dairy farmers who established an energy community (See Box 4.5).

Box 4.5: West Kerry Dairy Farmers Sustainable Energy Community and Dingle Peninsula 2030

Growing out of the Dingle Peninsula 2030 project, this is a voluntary farming community group with 130 members. They have focused on making energy efficiencies and reducing energy costs through working as an SEC. They completed an Energy Master Plan to consider the energy use and needs for these dairy farmers in West Kerry. This was done with grant aid from SEAI, ESB, Kerry Agri and Dovea Genetics. They have since worked to introduce solar PV panels and made cost savings in bulk purchasing.

Source: Interview; The Dingle Hub (2024).

4.3.3 Not Just Power but Action on Heat

Energy communities are involved in district heating and other heat projects, in district heating for example in the Netherlands. As well as power, energy communities can have a key role in residential heat projects. In Scotland, a partnership with the ESB and Ripple Energy has helped develop a consumer owned onshore wind project. Both examples are outlined in Box 4.6.

Box 4.6: Kirk Hill in Scotland and Thermo Bello in the Netherlands

Kirk Hill: Located in Scotland's South Ayrshire, Kirk Hill 18MW wind farm was developed by ESB working with Ripple Energy. It generated power for the first time in 2024 and was generating power for the first time earlier this year. It is the largest consumer-owned onshore wind project in the UK with 5,600 owners supported by Ripple Energy, a leading clean energy ownership platform, enabling people to part own large scale wind farms and solar parks. People across the UK invested, raising a third of the capital, which was matched by contributions from a private equity firm and another institutional investor.

Ripple Energy provides opportunities for consumers to invest in large-scale clean energy projects in exchange for access to affordable green electricity. It aims to make renewable energy ownership available to everyone at an affordable price.

Thermo Bello: The cooperative supplies low-temperature hot water to 222 homes and 7 commercial properties via an underground distribution network located in the district. Thermo Bello is a district energy company owned by residents in the EVA-Lanxmeer district.

Sources: Ripple Energy (2025); Giovannini (2023).

Community Heating and Cooling (CH&C) initiatives, where citizens own their local renewable heating infrastructure, are emerging all over Europe. In Belgium, the energy community Beauvent raised €1 million from their members in 30 minutes, and as a result, now supplies citizen-owned renewable heat to the municipality, 500 citizens, 25 Small and Medium Enterprises, and 2 hospitals in Ostend. Similar projects are succeeding in Greece, Italy, Denmark, France and the Netherland (Vansintjan, 2024).

Another example cited in Nordic Energy Research (2023) is that 100 communities operate their own grid (e.g., bioenergy villages (Bioenergiedörfer) and around 150 operate grids and distribute heat and electricity but do not produce electricity. A minority of the energy communities distribute electricity or heat without operating their own grid (Ahlemeyer et al 2022).

4.3.4 Focus on Addressing Energy Poverty

In a report for the European Commission, Koukoufikis et al (2023) concluded that energy communities can play a crucial role in tackling energy poverty, but require concerted efforts from policymakers, energy providers, and civil society to realise their full potential.

In Portugal, the renewable energy cooperative Coopérnico rents rooftops of socially-oriented institutions for its photovoltaic installations, providing them with additional income, allowing them to benefit from lower energy costs and giving them a free solar PV installation at the end of the leasing period (Greens/EFA, 2022). Eeklo, a city at the forefront of the Belgian energy transition, has lowered the barriers for citizen participation in renewable energy schemes by closely working together with Ecopower, an energy cooperative with nearly 60,000 members that powers more than 50,000 homes with 100 per cent renewable energy. More specifically, with the ambition to fight energy poverty, the city provided 750 citizens with one pre-financed share of Ecopower. In Croatia, a Green Energy Cooperative (ZEZ) project trained young and unemployed people to become energy advisors to help low-income households take energy efficiency measures in their homes and with municipality support, found employment under a Public Works programme for Energy Advisors, visiting 500 households in six months (Greens/EFA, 2022).

Nevertheless, while there is wide recognition of this potential it seems that the number of energy communities actively addressing the issue of energy poverty remains rather limited, while more research is needed to assess their actual social impact (Koukoufikis et al 2023).

4.3.5 Support Energy Efficiency Action and Social Support for Renewables

Energy communities can support wider energy efficiency action. SEAI found a significant effect of SECs on the adoption of home energy upgrades. They concluded that findings of this analysis are consistent with the idea that the SEC programme supports overcoming barriers of limited information and motivation amongst citizens. Yet, they cannot overcome other barriers to grant uptake, such as financial barriers, without sufficient supporting additional policies (SEAI, 2025b).

Social support or social acceptance is required for the development of wind energy and other renewables such as AD/biogas and solar. Earlier NESC work highlighted some of the key elements of social support including the importance of early community engagement, a

transparent process and clarity of project design and delivery and community benefits or local value with an important role for intermediaries (NESC, 2014). In recent years, developers have responded to tighter regulation and governance around engaging with communities and the planning process has also been reformed.

Community ownership of renewable energy projects leads to greater acceptance by local residents, as long as the projects meet their expectations (Hogan, 2024). The CoWind research project also found that community ownership and co-ownership arrangements can positively impact local residents' acceptance of wind farms (Power et al, 2019). A recent UK survey found that there was support for community energy with 62 per cent of the public agreeing they would support a community-owned renewable energy project in their area, compared to 40 per cent support for a privately-owned project (Common Wealth, 2025).

Energy communities can provide specialist community engagement and expertise in local energy systems (Reilly et al, 2024). There are opportunities through more partnerships between energy communities and others in a collective effort to increase awareness and social support for renewable energy projects (see Box 4.7). Energy communities have a convening power for members of the community, can share energy knowledge gained and can play a key role in sharing information and countering mis and disinformation.

Box 4.7: Eeklo

Collaboration with energy in communities is illustrated by Eeklo in Belgium, where the energy cooperative Ecopower is collaborating with the municipality to enable vulnerable households to access locally produced renewable energy at equitable rates.

In the pilot, 100 households receive membership shares to join the cooperative funded by loans from the local authority. Over a period of five years, these families reimburse the loan through monthly instalments, utilizing savings from reduced electricity bills. Subsequently, the city administration can allocate the repaid entry fees to support additional vulnerable households. The rolling fund of pre-financed social energy shares in this example makes local renewable energy more accessible to all.

Source: Smart Cities Market Place (2024).

4.3.6 Supporting a Just Transition

There has been a focus at European level on energy community development as a tool to support a just transition. A just transition considers the costs and benefits of decarbonisation and how they are shared fairly. How communities participate in and benefit from energy projects is a key part of the Scottish focus (Just Transition Commission, 2024).

The promotion of renewable energies is considered as a key driver for regions recognised as just transition regions in Europe with significant potential for job creation as well as meeting regional and local climate targets (European Commission, 2023a). At the same time, they point out the

bulk of income may flow out of the region instead of into the hands of local communities. A perceived lack of benefits can lead to mistrust of renewable energy development in communities and can give rise to local opposition (Ó Maonaigh et al, 2024). Participatory approaches, such as community (co) ownership models, can help build trust in local communities as they can both manage and benefit from renewable energy projects, and promote more environmental stewardship (Lennon et al., 2019). Research looking at diversity and inclusion in the energy sector in Ireland recommended that 'policy makers should place greater policy prioritisation to energy community initiatives, in recognition of their vital role in enabling the low-carbon transition at a local level' (Reilly et al, 2024: 4).

Dedicated funding streams and the provision of technical assistance are needed to empower and enable community energy projects. There are new opportunities from the European Social Climate Fund in the coming years (European Commission, 2025c).

4.3.7 Increase Social Cohesion, Trust and Support Resilience

Energy communities have the potential to generate social value and amplify social cohesion (European Commission, 2023b; 2023c). Bonfert (2024) concludes from a review of energy communities pilot projects in the Netherlands, Belgium, Sweden and the UK, that while not all citizens can be expected to participate in energy communities, having optional access to them would significantly enhance the democratic legitimacy and social accessibility of the energy transition. They can also enable local wealth building by retaining economic value in the local community.

Energy communities are driven by local volunteers. Both citizens and policymakers are often unaware of the various forms of civic engagement in energy (Thalberg and Schmid, 2024). This potential is an aspect of their value that is under explored but it is likely to be invaluable in building energy resilience at a local level.

Energy communities have the potential to build trust. Energy communities talk about the value of having a cup of tea with members of the local community and taking time for chatting, providing opportunities for people to ask questions and build trust. The International Energy Agency outline that energy communities depend on trust, both within and outside the community and can 'involve and educate people who would otherwise be excluded or passive in clean energy transitions' (IEA, 2023). However, trust is important to protect once gained. Where energy communities try to deliver projects but cannot, some members of energy communities worry that this trust might be eroded when things are not seen to progress.

4.3.8 Further Research

Increasing research in Ireland is helping to identify barriers and enablers for energy communities. For example, Maynooth University's interdisciplinary RENEW project, funded by Research Ireland is exploring the potential of energy communities as part of a sustainable energy system and the resources that can support them (Maynooth University, 2023).

As their role as energy actors develops, further research will help to provide data on the impacts of energy communities. One forthcoming project, ACHIEVE will help to address this gap. (See Box 4.8).

Box 4.8: ACHIEVE

The ACHIEVE project will set to examine new pathways to successful green energy transition. Societal acceptance and citizen engagement are crucial for successful energy transitions. However, engaging citizens and developing community energy initiatives in Ireland has been challenging, leading to increased opposition and limited participation.
Funded by the SEAI, and undertaken by DCU and Maynooth University, the project will produce a systematic review of EU and international best practices, drawing insights from exemplary case studies. This will allow the creation of a novel set of indicators and a toolkit for measuring the societal impacts of sustainable energy communities in addition to outlining methods for improved community engagement.

Source: SEAI (2024c).

Chapter 5: Enabling Factors for Energy Communities

5.1 Introduction

There is policy recognition that energy communities require supports to build capacity and in Ireland the SEAI have provided a strong enabling context for SECs to establish and grow. This chapter reflects on experience elsewhere on how energy communities can be enabled to increase local supports and connections through energy. It outlines policies and support measures which can create the conditions for energy communities in different ways.

5.1.1 Variety of Funding Approaches Can Support Energy Communities to Deliver

While volunteer-led, energy communities require financing to support their work from the start-up and scoping phase through to delivering on projects, recognised by SEAI (2023) in their overview of finance mechanisms for Renewable Energy Communities. There are a variety of ways this happens in European countries, for example through direct government grants and supports, feed-in tariffs (guaranteed prices for renewable energy generation) equity investment from community members or through crowdfunding (public share offers), bank loans, EU and philanthropic supports and green bonds (used by local authorities or energy communities to raise finance). One example, Westmill solar project was financed by a cooperative (REScoop, 2024a). The Netherlands has a Development Fund for energy community projects (see Box 5.1).

Box 5.1: Dutch Development Fund for Energy Cooperatives

The Development Fund for Energy Cooperatives ('Ontwikkelfonds voor energiecoöperaties') has been established by the Ministry of Economic Affairs of the Netherlands. EnergieSamen manages the Development Fund in collaboration with regional umbrella organizations and project offices. The Development Fund extends loans to energy cooperatives officially registered with the Chamber of Commerce. The fund supports projects focused on the large-scale generation of wind or solar energy, with the requirement that the energy cooperative becomes a majority owner (at least 50 per cent) of the corresponding wind or solar park. Eligible projects must be in the provinces of Drenthe, Limburg, Utrecht, Zuid-Holland, or the Achterhoek.

Source: European Commission (2025a).

In Scotland, grants and loans are available for energy communities. One recent example where support has been used to develop a solar project, working with a Higher Education Institute in Dundee (see Box 5.2).

Box 5.2: Dundee Renewable Energy Society Solar Meadow

The Dundee Renewable Energy Society (DRES) launched a solar meadow project at Bullionfield, near Dundee, which became operational in October 2024. The project aimed to promote sustainable community energy and alleviate fuel poverty in the local area. DRES, registered as a Community Benefit Society in 2018, collaborated with The James Hutton Institute, which owned the land and needed increased energy due to campus expansion.

The project involved installing 2.59MW solar photovoltaic panels. DRES received significant support from the Scottish Government's Community and Renewable Energy Scheme (CARES), including a £10,000 feasibility study grant, a £17,000 enablement grant, and a £115,990.20 loan. Furthermore, DRES successfully raised over £2.7 million through community share offers.

It's anticipated that the solar meadow will generate 2,214MWh of electricity annually, with 94 per cent being sold to The James Hutton Institute. Over its lifetime, the project is expected to generate approximately £1.4 million in community benefits, which will be invested in local initiatives to promote sustainable energy and address fuel poverty. Key challenges included laying a private wire under the A90 motorway, managing tree removal, dealing with higher-than-expected development costs, and negotiating complex legal arrangements, underscoring the importance of careful financial management and strong collaboration with partners like The James Hutton Institute.

Source: Local Energy Scotland (2025).

Member equity, in which investors receive shares in a project, is used in Germany but where projects have been successful this has been combined with a variety of other sources (see Box 5.3 for one example - Energiegenossenschaft Odenwald eG).

Box 5.3: Energiegenossenschaft Odenwald eG

One of Germany's successful energy communities, Energiegenossenschaft Odenwald eG, has over 3,000 members. Founded by a community in the Odenwaldkreis district in collaboration with municipal actors and a local cooperative bank, it has since secured €50 million in investments from a variety of sources to build out 83 solar plants across a collection of rooftops and fields, in addition to wind turbines.To become a member, the minimum fee is €100. Energiegenossenschaft Odenwald eG is a notable example of cooperation between individuals, local authorities, and banks.

Source: Clean Air Task Force (2024).

5.1.2 Enabling a Range of Ownership Approaches

Where energy communities have become significant local energy actors in energy generation, they have been supported and enabled through a range of mechanisms in addition to finance, including national target, regulation, supportive policy measures, advisory supports and local governance structures.

There are different models of community ownership- wholly owned or split ownership and different models of involvement and ownership. Providing an opportunity for the local community to invest is one potential option. Almost half of respondents in the Co-Wind research survey said an opportunity to buy shares in a wind farm would increase their willingness to agree to a turbine being located within 1km of their home (Power et al, 2019).

Requirements for local ownership of renewable energy generation projects have proven to be a useful instrument in the Netherlands. The Dutch Climate Act advises that 50 per cent of local energy ownership is targeted by 2030, allowing municipalities to enforce this as a formal requirement. This stipulation ensures that the community benefits from renewable energy projects, preventing the capture of revenues by commercial entities. Energy cooperatives, in particular, benefit from this requirement, as private developers often turn to them to meet the local ownership criteria (Thalberg and Schmid, 2024).

Internationally, partnerships with developers have had an important role in working with energy communities (Brennan and Van Rensburg, 2024). They found that shared ownership projects can be complex to execute but can bear fruit for larger-scale projects. Key elements for successful co-development were noted as working with approachable and reliable developers; intermediary to facilitate partnership and provide experience; control and governance for the community; strong engagement and trust building; and creating a forum for community groups and co-ops to share experience. See Box 5.4 for some examples of joint ownership projects from the Recode project.

Box 5.4: Joint Ownership Examples

Gunns Hill Wind Farm, Ontario, Canada involves joint ownership of a wind farm between Oxford Community Energy Co-op (OCEC), Prowind Canada and Six Nations. OCEC owns 49 per cent of the units- 10 wind turbines, 1.8MW each. Prowind coordinated between authorities, landowners, contractors and partners. There were 200 jobs during the development & construction phase. $25,000 annual community benefit fund was created. The developer was reported as being crucial to provide expertise which the cooperative did not have. The project has been successful in providing significant returns to the cooperative.

Fintry Scotland: A community joined with private developer who was developing 14 turbine wind farm. The made an agreement to add an additional turbine for the community- Fintry Renewable Energy Enterprise. Fintry Development Trust (charitable status) established to manage the income. The ownership model was a Production Sharing Agreement in which Fintry does not own the asset but has right to one turbines worth of income. Finance came from developer- to be paid back over 15 years plus interest. The electricity generated is sold to the grid. Any resident becomes as member for life for £1 (300 members). The challenges included getting the developer on board; lumpy income; risk but success included the significant income to local community, particularly as the loan and interest was paid off.

Source: Brennan and Van Rensburg, (2024).

While Ireland currently only includes 100 per cent community owned renewable energy projects as eligible for supports, there may be opportunities to widen that. The European Commission's Just Transition Platform have pointed the shared ownership model as potential inspiration for Ireland (European Commission, 2025a).

5.1.3 Development of Energy Communities Is Strongly Shaped by the Governance and Policy Framework

In Germany, an early feed in tariff scheme supported the growth of energy communities but this was replaced by an auction system which has not been as enabling (Fitzgerald, 2020; Gente, 2025). However, the shift to large wind turbines and the governance model has made it difficult for them to develop their potential (Gährs et al, 2024: 5). There are local examples of vibrant communities such as the German region Rhein-Hunsrück-Kreis (von Landrat and Fleck, 2024).

Requirements for local ownership of renewable energy generation projects have proven to be a useful instrument in the Netherlands. The Dutch climate act advises that 50 per cent of local energy ownership is targeted by 2030, allowing municipalities to enforce this as a formal requirement (EPRS, 2021).

Scotland's governance approach has supported the growth of energy communities over the last decade (See Box 5.5).

Box 5.5: Scottish Community and Locally Owned Renewable Energy and CARES

The Scottish Government has set a target of 2 GW of renewable energy to be community or locally owned by 2030. Research from Energy Saving Trust in 2022 has found that an estimated 908 MW of community and locally owned renewable energy capacity with an estimated 1,505 MW in various stages of development. In 2022 this was producing 1,933 GWh of renewable energy annually across 26,290 installations. These included a wide range locally owned developments including public sector, local authorities, farms, businesses and energy communities.

The greatest share of operational capacity of community and locally owned energy owned by farm and estate (41 per cent, 370 MW) most commonly using wind, biomass and hydroelectric technologies. Local authorities had the second largest share (17 per cent, 157 MW) using most often installed heat pumps, solar PV and solar thermal technologies. Local business has the third largest share (13 per cent, 117 MW) with a higher share of biogas than other categories. The technologies with the biggest share capacity were wind (37 per cent, 338 MW), followed by biomass (30 per cent, 277 MW). Most of the community owned renewable capacity is from wind and hydroelectricity technologies. Both can be attractive investments to local community groups either to directly make use of natural resources within their local area or as part of shared ownership offers from renewable developers.

In Scotland's Western Isles, projects have been found to generate, on average, 34 times more benefit for local communities than commercially operated projects. On the Scottish island of Westray, a single turbine operated by the Westray Development Trust produces nearly £300,000 per year for the local community.

The Scottish Government's Community and Renewable Energy Scheme, CARES, was established in 2010 to encourage local and community ownership of renewable energy projects across Scotland and to help maximise the benefits of renewable energy systems, whether commercial or community owned. Delivered on the government's behalf by Local Energy Scotland, it has provided more than £58 million in funding to applicants and supported more than 600 projects across the country in total. The average community value from their recent projects is £5K MW per year.

Sources: Energy Savings Trust (2023); Government of Ireland (20245c).

5.1.4 Municipalities (Local Authorities) In Supportive Role

The provision of public land/spaces for the installation of renewable energy projects by local communities is one-way municipalities are supporting energy community projects. The Municipalities of Zagreb (Croatia), Plymouth (England), and Frankfurt (Germany) are working with local energy communities to install photovoltaic systems on municipal rooftops, providing local, cheap energy to their citizens (Lifeloop, 2023).

Local authorities can perform a central role in directly enabling communities to develop renewable energy co-operatives through the provision of supports and as collaborative partners (Wirth, 2014), or indirectly through the establishment and resourcing of intermediaries; actors that create "new possibilities and dynamism within a system" (Howell, 2006, p. 104 cited in Doyle, 2021).

However, the potential of energy communities and how municipalities can support them is not always widely understood. One study for the European Commission (Smart Cities Marketplace, 2024) surveyed 44 municipalities to examine their perspectives on energy communities. Few (8 per cent) of those surveyed had a sufficient to good understanding of the concepts underpinning the definitions of energy communities, with little understanding of energy democracy. 73 per cent considered lowering the energy bill as the most important economic benefit of an energy community. They viewed justice as an important benefit but found it difficult to put into practice, with most energy communities perceived to struggle to reach out to vulnerable and minority groups. The research pointed to the need for greater awareness among local authorities on the benefits and potential of energy communities.

5.1.5 Capacity to Share Energy and Develop Innovative Local Solutions

Looking forward, as renewables rise in scale, the energy system is predicted to become more decentralised with many relatively small-scale production locations (EEA, 2022). It is not clear yet what the role of energy communities will be in delivering projects but the accessibility of solar PV and growth of AD (biogas) is likely to increase the numbers who wish to get involved.

The IEA (2024) have outlined that successful energy transitions are not just about finding the cheapest pathway but about recognising and valuing the wider benefits of clean energy transitions for all. Whether through wind turbines, solar panels, district heating systems, or community-run energy cooperatives, these initiatives allow local groups to 'shape their own energy destiny' (DTNI, 2025: 1).

Small scale decentralised systems- microgrids - can 'have a key role to play in the energy transition, supporting the integration of an increasing share of renewable energies and providing a route for consumers to become prosumers by engaging in the buying and selling of electricity.' (Spencer Jones, 2022). The SEAI award winning Tallaght Community Energy Living Lab (Tallaght Smart Grid Test Bed) is a local smart community grid that enables communities to produce and sell electricity generated from renewable sources such as wind, solar and hydro. (SDCC, 2022: 382).

With energy sharing, customers will be able to more easily access renewable electricity generated or stored off-site by family, friends, neighbours or communities (European Commission, 2025d). In theory, energy communities, private or public entities will be able to provide energy sharing services, but this will be tightly regulated. This is already the case in other countries, notably Portugal, France and Norway where households share, usually solar energy supply with others in the same apartment blocks or neighbourhood. This is virtual sharing, so it is possible to share more widely among Electricity Supply Organisations (ESOs) through collective investments, service agreements, or purchase agreements. There are some energy sharing schemes in Europe but this reform will increase this quickly and has a focus on vulnerable or energy-poor consumers. The Directive provides that energy sharing projects that are owned by public authorities will be required to make shared electricity accessible to vulnerable or energy poor customers, with the expectation that this about 10 per cent on average of the energy shared. The role of the regulator, CRU is critical to ensure appropriate consumer protection, data sharing and licensing suppliers to provide data sharing are in place.

Local community-based generating, sharing and consuming of electricity can significantly avoid these losses and enhance energy efficiency. For example, in northern Perth in Australia, a battery resource shared by 119 households resulted in collective savings of over A$ 81,0002 during a five-year period. The battery also helped ease the strain on the grid by enabling an 85 per cent reduction in consumption of electricity from the grid at peak times for participating households (IEA, 2023).

Peer to peer trading or P2P is a type of energy sharing in which households, businesses, and communities can trade energy with each other. Malik et al (2025) argue that that it can deliver tangible benefits to households, communities, and the wider electricity system in Ireland, 'energy communities like SECs can help pilot, de-risk, and demonstrate the benefits of peer-based trading before broader national rollout' (Malik et al, 2025: 6).

5.1.6 Expert Intermediary Organisations Playing Key Roles

There are many examples of energy cooperatives that provide support to other energy communities. For example, REScoop MECISE (Mutual for Energy Communities Investing in a Sustainable Europe) is a European cooperative society founded in 2018 by five energy cooperatives, Ecopower (Belgium), Courant d'Air (Belgium), Som Energia (Spain), Enercoop (France), Energy4All (UK), and the European network REScoop. The cooperative society provides trusted expertise and crucial support in managing risk (REScoop, 2020).

In Ireland, one example is Energy Cooperatives Ireland, a co-operative renewable energy consultancy promoting community access to the benefits of renewable energy (Energy Cooperatives Ireland, 2024).

In the UK, Energy4all work with energy communities to navigate challenges and are supported by 37 cooperatives who pay them for their service. One example of project development is outlined in Box 5.6.

Box 5.6: Wind Farm Share - Energy4All and Falck Renewables

Falck Renewables has worked community energy experts Energy4A to set up seven energy co-operatives at its Scottish onshore wind farms, enabling thousands of people to buy a stake in their local wind farm through ScotWind, the special auction of Scotland's offshore wind licences and is run by Crown Estates Scotland. This is a type of shared ownership model in that people were able to invest across the UK but it is not owned by the local community. The Falck Renewables, BlueFloat Energy, Ørsted consortium and Energy4All are working on a framework which will allow residents of Scotland and Scottish communities to share the financial benefits of the offshore wind energy projects the consortium plans to build in the future.

The ScotWind project was enabled by a clear Scottish signal to developers that shared ownership will bring benefits but it is not mandatory.

Investment opportunities for citizens for an offshore wind project is a way of bringing in citizens to private developments. Scot Wind was open to all across the UK to invest. Given the scale of resources required, more local investments are not seen as viable for large off shore projects. While not a community ownership approach, individual/citizen investing was part of its development, viewed by Energy4all as a replicable model.

Source: Energy4all (2022); Interview.

Chapter 6: Barriers Experienced by Energy Communities

6.1 Introduction

Despite the growth of sustainable energy communities, and contributions made in energy efficiency and retrofitting, the numbers of energy communities owning and generating energy has not grown. Despite singular efforts in Tipperary, well documented in NESC (2014), the Templederry Wind Farm remains Ireland's uniquely owned community wind farm as Ireland's developer led model to energy generation in on-shore and now off-shore wind as the primary means of increasing renewable energy has not lend itself easily to community involvement. However, there are community solar developments in progress, including Community Power but some have faced delay and administrative hurdles.

While some of the barriers and issues experienced by energy communities are particular to Ireland, there are others that are common across Europe, including access to finance and to the grid. There are challenges for volunteer-led energy communities, working to deliver projects that can be technical, resource-intensive and complex to administer. These are noted in European research, including the ACCEPT Horizon 2020 project (Lennon and Dunphy, 2024); REScoop; and in a European study on regulatory barriers and recommendation for clean energy transition on the islands in Ireland (European Commission, 2022). REScoop have provided a model template for assessing barriers and potential for energy community development and this includes an overview of overall potential; barriers and drivers; public policies and costs and benefits (REScoop, 2024c).

In June 2025 the Department of Climate, Energy and the Environment published an assessment of barriers to Renewable Energy Communities (RECs). The assessment found barriers exist that require targeted support to unlock the full potential of RECs (Government of Ireland, 2025a). Box 6.1 outlines the key barriers identified.

Box 6.1: Barriers to Renewable Energy Communities

Grid Access Costs and Availability: High grid connection costs, especially for projects in rural areas with relatively low grid capacity, profoundly impact project viability. Rural areas may experience limited network capacity compared to urban areas. The extent of costly grid reinforcement works can vary enormously, creating uncertainty, as a similar size installation in one location could require a significantly different level of grid development and cost than another location.

Access to Financing: Communities struggle to secure loans due to limited assets, expertise or track records. Access to upfront seed capital is essential to allow projects meet costs from initial stage.

Administrative Burden: The complexity and volume of tasks including project management, planning, and grant applications can impact strongly on volunteer-led groups.

Technical Expertise: Lack of in-house knowledge about renewable technologies inhibits participation.

Reliance on Volunteers: Time-poor volunteers struggle to balance commitments and are likely to lack industry know how, compared to professionals.

Planning and Social Acceptance: Managing objections during the planning process, particularly in rural areas, adds delays.

Source: Government of Ireland (2025a).

In NESC's meetings with a range of energy communities, researchers and stakeholders, many of these barriers were raised. Also outlined were the difficulties of working to deliver projects over many years' overall lived experience.

This chapter sets out the issues and barriers identified by interviewees. Some considered these persistent barriers reflected a lack of ambition for energy communities in Ireland or a lack of urgency. Some felt they weren't being taken seriously as energy actors, despite being set 'impossible tasks.' There was a feeling of potential that energy community members felt was not widely understood.

6.2 The 'Doing' is Almost Undoable

The programme delivered by the SEAI was considered to have a good basis around the learning and planning stages. Many talked positively about the energy master plan process and were proud they had produced them but talked about feeling they let their communities down when after progressing they then could not proceed to action. Some energy communities commented that they had brought everyone along the steps until they found their capacity to move forward was limited and 'they don't know what to do'.

Energy communities outlined how for some it has taken tenacity and years of unpaid work by volunteers, with personal stress experienced at times. Many report that the 'doing' phase is very challenging to progress, over long time periods and with little demonstratable progress to be able to share with their communities. This is not due to lack of ambition or effort but may lie in a lack of some fundamental governance and policy pieces that could create a stronger 'bridge' between local community energy transition action with national plans and ambition. Some felt it was impossible to thrive- and they faced 'obstacle after obstacle'.

With support from SEAI to get started, some SEC's wanting to generate energy found they did not progress past the feasibility study phase, for example, where a community project was at risk of running at a loss so could not progress or faced high costs to access the grid due to their location.

6.3 Policy Framework is Limited

While acknowledging the policy supports in place and the contribution of the SEAI to their development, some energy communities considered this to be insufficient, particularly for the more ambitious ones who wished to generate energy. Some have found the policy framework and system administratively onerous and slow to progress.

Many consider the special characteristics and capacities of fully owned community projects require dedicated policy measures and support to navigate a complex process. The SRESS scheme was only new but there were mixed views. Some were hopeful it would enable more energy communities to get through. Others considered that the SRESS would be insufficient as a driver or enabler as the tariff too low and did not factor in energy community costs. Several energy communities wanted to see support for other types of ownership model, including with developers. For communities working as volunteers, without access to funds and grid costs high, they weren't optimistic there was a way of progressing that would be viable for most communities.

6.4 Resources Are Insufficient

Some energy communities considered there was little resourcing to deliver results on the ground, for example to pay for administrative support to manage applications for solar PV schemes or to conduct a retrofit project. They felt they were 'hamstrung' by their entirely voluntary capacity.

Some energy communities talked about the pressure to raise funds to do projects and that there were administrative costs, legal and financial fees that needed to be met. Some energy communities had received philanthropic funds to take on staff for a few years. One energy community had taken on someone through charitable funds but their role was directed at raising further funds to support the organisation. The need for core funding for a manager or project leader at the delivery stage of projects was raised by many energy communities. Observations were also made by stakeholders that they thought the policy system could do more to support communities by way of funding their activities directly.

6.5 Lack of Trust

The trust in and capacity of energy communities to manage finance wasn't always viewed as being there unlike in other EU countries. For some they wondered why serious energy communities with a track record and sound governance structures weren't given the opportunity to grow. They acknowledged there were risks in large scale developments but some commented that there were structures and processes in place that worked for other sectors, for example dairy cooperatives. Some wondered if there was a hesitancy to support communities to be key energy actors given these risks and potential negative impacts if projects failed.

6.6 Reliance on Unpaid Volunteers

Stakeholders observed that while there was an awareness of the valuable role of volunteers in this sector, in meetings the energy community member was the 'only one not being paid in the room.' This meant it was difficult to deliver complex projects. Some energy communities felt that the interest on the ground and effort being put in was not sustainable without well-considered state supports and recognition of their contribution. As volunteers, some felt they weren't given the necessary support for their efforts to support climate action and the energy transition.

6.7 Limited Grid Access is Prohibitive

There were widespread views that a key challenge for energy communities who wish to generate energy is access to the grid. Grid connection availability and cost are major challenges and can prohibit projects getting off the ground. Some observed that communities had been treated the same as developers at times in terms of administration but not in terms of grid costs.

6.8 Communities Lack Options for Types of Ownership

A strong theme that concerned energy communities was the lack of equity/ownership possibilities of energy generation. For some energy communities, full ownership was the main goal - 'We don't want a bag of sweets, but we want ownership'. Some recognised that there was some resistance to communities having more equity as some developers don't want communities 'in the pot'. For some, the opportunity to have local ownership was not about immediate benefits but about generating a future for rural regeneration and 'to hand something positive over'.

6.9 Lack of Recognition of Value and Potential

Some energy communities felt there was a perceived lack of recognition of their role in the energy transition. Some stakeholders considered the value of energy communities was not clear to the policy system but despite that, it asked a lot of them as volunteers. Some observed that research on the potential social and economic impact of community energy projects would be needed to document this value.

There is an overall sense among energy communities and stakeholders that what energy communities can do may not be fully appreciated yet but the future does look bright for them if they can keep going. The role and need for local energy actors was growing both for acting on renewable energy but also to support the transition needed at local level to respond to climate change and become more resilient.

6.10 Deeper Transition Issues

More localised and locally owned energy generation requires greater local autonomy, choice and role in energy generation and use by new market actors. This is challenging for existing institutions, policy makers and developers and represents a change of culture in the roles and responsibilities of state, civil society and private/business. Other sectors have incorporated local actors for example dairy cooperatives. For some energy communities established as social enterprises, they may be more readily recognised as such in being entrepreneurial, capable of managing risk, investment and social objectives. NESC's (2023) report and recommendations on social enterprises on the island of Ireland may have relevance for energy communities. Increasing the business skills of energy communities is a focus of a new EU initiative the European Energy Communities Facility coordinated by REScoop. It will distribute a total of €7 million to at least 140 energy communities to help them develop and implement solid business plans for their renewable energy projects in 2025 and 2026 (European Energy Communities Facility, 2025).

There are barriers to further progress that may hamper the level of participation in the energy transition unless addressed. However, there is growing consensus on the main barriers for Renewable Energy Communities across government, academic and NESC research. More can be done to further support energy communities who wish to generate renewable energy, requiring more targeted measures and a greater understanding of the role and benefit that energy communities may bring to the energy transition. The next chapter outlines some further enablers that could be developed.

Chapter 7: Towards Further Development of Energy Communities

7.1 Introduction: Potential to Progress

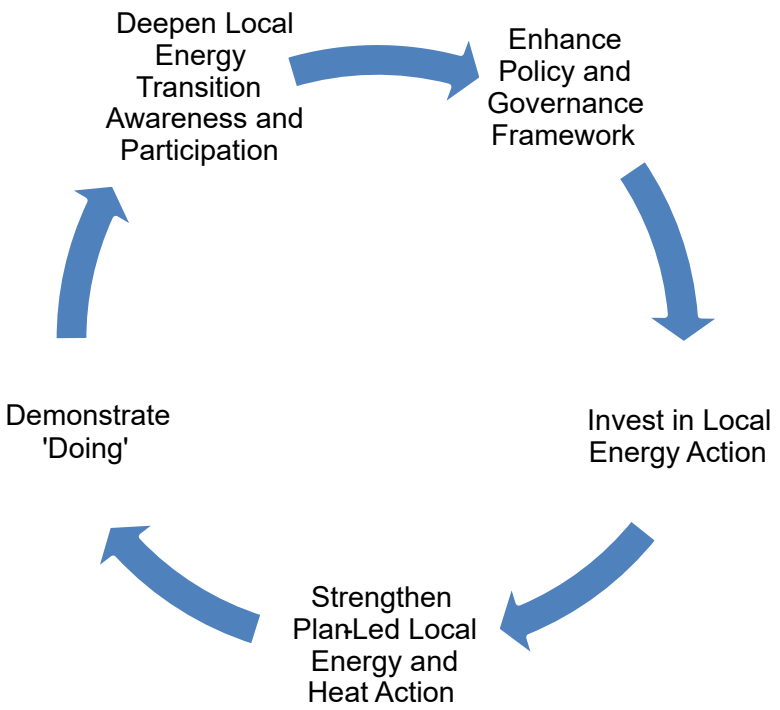
From considering European and Irish practice and the experience of energy communities, this paper concludes with outlining some potential areas that could be further strengthened.

There is remarkable consensus on some of the key barriers that energy communities face, particularly those Renewable Energy Communities who wish to generated energy. The numbers of SECs in Ireland shows that there is an appetite within communities to be part of the energy transition and the SEAI has provided guidance and support for their development. This paper has provided an overview of some of the ways such communities can provide benefits beyond their role in reducing GHG emissions to reflect the social and economic potential that may not as yet be well understood.

Five potential areas have been identified from NESC's examination of energy communities in Ireland could help to unlock the potential of energy communities to deliver more for their communities (Figure 7.1).

This chapter examines each of these areas.

Figure 7.1: Five Areas to Further Enable Energy Communities



7.2 Enhance Policy and Governance Framework

Supporting a range of ownership models would increase opportunities for Renewable Energy Communities to get involved. Co-ownership and shared equity models could expand what is possible here. With increasing renewable energy activity at local level, energy communities could be further enabled to collaborate with local authorities and other local actors in local energy planning and also target action towards addressing local energy poverty. New opportunities such as energy sharing can enable energy communities to be market actors once in place in Ireland. This would expand the range of activities and increase the potential to generate local value from the energy transition.

7.3 Invest- Local Energy Action as the New Frontier

Development funding is needed to support those energy communities to start and deliver projects. For example, in Scotland, the CARES (Community and Renewable Energy Scheme) programme provides such development funding for new community owned schemes, while most new project funding comes from community share offers (Local Energy Scotland 2022). Energy communities would benefit from a greater resource of mentors to support the delivery of demonstration projects, showcase what energy communities can do and document their value to the energy transition. The value of volunteering and energy communities could be further recognised and supported with tailored training and skills development in technical, digital and engagement areas.

7.4 Strengthen Place-based Energy and Heat Action

Energy communities can be more involved in local energy areas planning and opportunities, including the move to decarbonise heat. With the future of district heating still unfolding and rural communities looking to be energy secure and resilient, there are benefits, demonstrated in other countries, of bringing energy communities together and being part of active local networks and planning. SEAI (2025b) research points to the association of energy communities in rural areas- more supports to foster urban communities to take part may be required. Energy communities can also be supported to be part of local resilience planning, in local energy hubs and back- up energy resources.

7.5 Demonstrate 'Doing' in Learn-Plan-Do

Further resourcing and developmental opportunities could be used to underpin innovation in local energy action. This would provide increase learning opportunities for other energy communities but also provide ways for the further and higher education sectors to engage and support energy communities.

As a new local frontier, demonstration projects could be identified and resourced across the country, representing a range of energy community activity in for example: energy efficiency and retrofit, solar PV/biogas/wind energy generation, energy sharing when enabled. These projects could be showcased and shared through social media to inspire other interested energy communities.

7.6 Deepen Local Energy Transition Awareness and Participation

The activities of energy communities could be shared through networks or online fora. Energy communities would value a forum where they can come together to talk with each other, share experiences and learning. Local energy forums with wider community participation could increase energy engagement and action. Supporting energy communities to develop across the island of Ireland in every community would be important to ensure diversity and inclusive participation (Reilly et al, 2024). Energy communities that prioritise inclusivity can facilitate equitable access to clean, affordable energy solutions, thus breaking down barriers to development and to social progress (Koukoufikis et al, 2023). Currently, not all communities have the resources or capacity to develop energy communities, but there is sufficient experience and knowledge in the SEC network to draw from, if supported to share and collaborate.

7.7 Conclusion

Communities have been showing a willingness to get involved in the energy transition with over a thousand Sustainable Energy Communities registered to date with SEAI. These active communities can play a positive role as part of Ireland's energy transition at a local level as part of an effective, fair, and inclusive transition.

Despite Ireland's early action to recognise energy communities and provide supports and providing a firm policy foundation for them to grow, the scaffolding requires strengthening. Several barriers to further progress for some remain and the pace of development of Renewable Energy Communities has been slower than in other European countries. Accessing the grid, finance, the administrative burden, and some enabling policy framework limitations remain key challenges. In addition, the limitations of current ownership models and governance and supports to underpin the capacity for energy communities to 'do' more.

These experiences and views reflect a sense that what energy communities can do in the energy transition is not as recognised in Ireland as in other European countries as yet, but they remain hopeful as what the future might be like for them. It is likely the potential is only going to widen in time. Energy communities are potentially a key part of Ireland's social and community network to support the energy transition across the island and can be an important tool for local participation.

Given this interest, willingness to engage and do, Ireland may be missing an opportunity to make more of this important network. Recognising energy communities as key actors in a participative energy transition could bring wider societal benefits and support communities to benefit from the economic opportunities.

Further social science research to increase understanding of the activities, social and economic impacts and potential of energy communities in Ireland would be of value.

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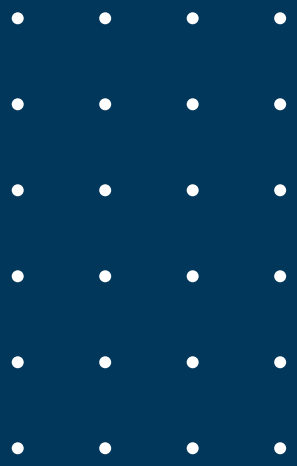

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